

Appl. No. 10/621,414

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Remarks/Arguments

The present communication is responsive to both the Final Office Action and the Advisory Action dated February 19, 2008.

In a submission dated January 28, 2008, the Applicants presented arguments to address the claim rejections raised in the Final Office Action. The Applicants thank the Examiner for the comments in the Advisory Action, which noted a perceived deficiency of form of the Applicants' arguments, specifically that the arguments dealt with the references cited in the Final Office Action individually instead of in combination. It was believed that the clearest way to demonstrate differences between the combination of references cited in the Final Office Action and the present invention as claimed was to discuss claim elements that were missing from each reference. It was the Applicants' intention to demonstrate that claim elements that are absent from individual references are not rendered obvious from a combination of such references. Many of the previous arguments, as well as additional arguments, are presented below but in the proper context of the combined teachings relied upon in the Final Office Action.

The following remarks and arguments also take into account the clarifications of how the cited references are being interpreted by the Examiner, as discussed in the Advisory Action.

In an attempt to advance the application toward allowance, the Applicants take this opportunity to make amendments to the independent claims. These amendments are fully supported by the specification as originally filed. No new subject matter has been added.

With reference first to claim 1, the third clause of the claim has been amended to recite "receiving user input information to determine sequencing [[for]] of startup or shutdown of the plurality of power supplies during operation of the power system". The claim as amended thus clarifies that the determined sequencing of startup or shutdown of the power supplies relates to actual operation of the power system.

The final clause of the claim has also been amended to explicitly recite that the control apparatus controls the plurality of power supplies in accordance with the configuration information, which is consistent with the displayed topology and sequencing of the plurality of

Appl. No. 10/621,414

power supplies. Although it is believed that this usage of the produced configuration information was inherent in the original claim, the Applicants have now explicitly recited control of the power supplies in accordance with the configuration information in the claim. This has been described, for example, at least at paragraph [0034] of the published version of the present application.

The other independent claims 18 and 19 have been amended in the same way as claim 1.

Turning now to the Final Office Action, all of the claims 1 to 25 stand rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over United States Patent No. 7,111,018 (hereinafter "Goodrich") in view of a non-patent document entitled "Power System Simulator for Operations" (hereinafter "Siemens"), in further view of United States Patent No. 7,062,359 (hereinafter "Bjorklund").

For the avoidance of any doubt, the Applicants wish to stress that claim 1 refers clearly to both "the topology of the power system" and to "the sequencing of startup or shutdown of the plurality of power supplies". These are distinct and different, as is made clear throughout the description and claims. The topology refers to the physical connections among the power supplies. Sequencing refers to an order in which the power supplies are started up or shutdown. For example, Figs. 10 and 11 of the present application both show the same topology of the power system, but they show different sequencing of the power supplies.

Claim 1 recites displaying of a graphical display representing the topology of the power system. Such a graphical display is disclosed by each of the applied references, as noted in the Final Office Action. Claim 1 also recites displaying of a graphical display "representing the sequencing for startup or shutdown of the plurality of power supplies". This is not disclosed or suggested by, or obvious from, the applied references as discussed in detail below.

More specifically, claim 1 as amended recites, among other things, the following three steps:

"receiving user input information to determine sequencing [[for]] of startup or shutdown of the plurality of power supplies during operation of the power system;

Appl. No. 10/621,414

displaying on the display device a graphical display representing the sequencing of the plurality of power supplies; and

producing said configuration information for the control apparatus consistent with the displayed topology and sequencing of the plurality of power supplies, the control apparatus controlling the plurality of power supplies in accordance with the produced configuration information".

Similar features have also been recited in the other independent claims 18 and 19.

At least these features are not disclosed or suggested, or rendered obvious, by the cited combination of Goodrich, Siemens, and Bjorklund.

Even if one were to combine the teachings of the three cited references, which the Applicants in no way concede would be obvious, the claimed invention would remain patentable over the combined teachings.

With respect to Goodrich, it is recognized and acknowledged in the Final Office Action that Goodrich does not expressly teach the above steps of displaying and producing, and that Goodrich in view of Siemens does not expressly teach the above step of receiving user input information. It is therefore apparent from the Final Office Action, and also the Advisory Action, that Goodrich is relied upon by the Examiner as teaching features relating to displaying a graphical display representing a topology of a power system. Siemens is apparently relied upon to demonstrate representing the sequencing of power supplies and producing configuration information. Finally, reference is made to Bjorklund as allegedly disclosing determination of sequencing for startup or shutdown of power supplies based on received user input information.

Thus, it is proposed in the Final Office Action that it would be obvious to a person skilled in the art to combine the teachings of an integrated database and network topology display from Goodrich with the simulator disclosed in Siemens and the control system disclosed in Bjorklund. The combined teachings might, arguably, provide some sort of system display and control features as disclosed in Goodrich and Bjorklund and a simulation and analysis facility originating from the teachings of Siemens. The present invention as claimed patentably distinguishes over

Appl. No. 10/621,414

even this combination, which again the Applicants in no way concede would be obvious to a person skilled in the art.

Considering claim 1 in detail, the Applicants acknowledge, as does the Final Office Action, that the cited combination would include some form of receiving information determining a topology of a power system and displaying on a display device a graphical display representing the topology.

Regarding the claim feature of receiving user input information to determine sequencing, this feature has been clarified as noted above. The claim as amended recites sequencing of startup or shutdown of the plurality of power supplies during operation of the power system. As explicitly acknowledged at the bottom of page 3 of the Final Office Action, Goodrich in view of Siemens do not expressly teach this receiving step as it was recited in the previous version of claim 1. Thus, any relevant teachings regarding this feature, as previously recited in the claim and in its amended form as well, would necessarily have to come from Bjorklund.

As recognized in the Final Office Action, Bjorklund discloses a process 1 with circuit apparatus to control power flow in different ways, such as stopping, starting, regulating, reducing and reversing power flow, in a power substation, via communications channels and a human/machine interface which may include a graphical display. As stated at column 11, lines 41 et seq. the interface "is equipped with schematic graphical representations of transmissions lines such that real time values may be displayed on request ... so displaying actual real-time electrical or other values (e.g., temperatures) for parts or components of the lines. The display may also represent in more detail actual circuits. Again using the schematic graphical representations of circuits real time values may be displayed, on request, for parts, lines or components of said circuits."

There is no disclosure or suggestion in Bjorklund of the claim 1 step of "receiving user input information to determine sequencing of startup or shutdown of the plurality of power supplies during operation of the power system". While Bjorklund discloses control of parts of the process 1, and selection of icons on a topological display to monitor real-time values,

Appl. No. 10/621,414

for example, there is no disclosure or suggestion of any sequencing for startup or shutdown of a plurality of power supplies.

The Examiner has acknowledged that the claimed feature of receiving user input information to determine sequencing has not been disclosed in the combination of Goodrich with Siemens. The further combination of the teachings of these references with Bjorklund, while arguably adding some additional features, would not result in a combination that includes receiving user input information to determine sequencing of startup or shutdown of the plurality of power supplies during operation of the power system, as recited in claim 1. Since this feature is absent from the combination of Goodrich and Siemens as acknowledged in the Final Office Action, and is also absent from Bjorklund as discussed above, then the feature is also necessarily absent from the combined teachings of Goodrich, Siemens, and Bjorklund.

The next clause of claim 1 recites a step of displaying on the display device a graphical display representing the sequencing of the plurality of power supplies. The Final Office Action acknowledges that Goodrich does not expressly teach this feature, and accordingly any potential relevant teachings in the combination of references cited in the Final Office Action would necessarily have to come from Siemens or Bjorklund.

Siemens does not disclose or suggest this claim feature. In this respect the Final Office Action refers to page 7 of Siemens. This page is a diagram which shows a topology of a power system, and a prevailing (whether actual or simulated) state of the power system. It does not show any information "representing the sequencing of startup or shutdown of the plurality of power supplies" as recited in claim 1.

The Final Office Action further contends that "Siemens also shows a topology diagram and on the state diagram after running through the sequence operation the diagram displays information depicting the sequenced power circuits as well as the configuration information that is consistent with the displayed topology.". There is a distinct and clear difference between displaying "a graphical display representing the sequencing of the plurality of power supplies", as recited in claim 1, and displaying a topology and state diagram of a power system (whether or not

Appl. No. 10/621,414

this is after sequencing), as disclosed by Siemens. Siemens does not appear to display any sequencing.

The Advisory Action clarifies specific interpretations of Siemens that are relied upon for the purpose of rejecting the claims. For example, the Examiner refers to an interpretation of the Siemens test circuit where a user can select which tests to perform to sequence power supplies, and indicates that selecting fault sequences within the teachings in Siemens is similar to determining a sequence. The Advisory Action further asserts that the teachings in Siemens of presenting to the user an ordered list of overloaded elements and switching the loads on the interface, in combination with the teachings of Goodrich, would meet this limitation of claim 1. This conclusion appears to be based on a further interpretation that the user must see the graphical display to view the switching results.

With respect, the Applicants note that Siemens relates only to simulation of networks, and not to actual control of such networks. Amended claim 1 clearly indicates that the sequencing of startup or shutdown of the plurality of power supplies relates to operation of the power system. Any sort of sequence in Siemens relates to system simulation and analysis, not to operation of a system. The "Activity Sequence Control" referred to in the short circuit analysis section of Siemens relates to something entirely different than sequencing of power supplies for startup or shutdown during power system operation. No person of skill in the art to which the present application pertains would interpret a fault analysis sequence as being any sort of power supply sequencing as claimed. The interpretation being applied in rejecting the present claims is not consistent with the knowledge in light of which a skilled person would interpret the teachings of Siemens.

It is noted that there is similarly no disclosure or suggestion at all in Bjorklund of the claim feature of displaying a graphical display representing the sequencing of the plurality of power supplies. Bjorklund only discloses a graphical display of transmissions lines and actual circuits, i.e., the topology of the system, and associated values. Bjorklund does not describe any sequencing, nor any graphical display representing sequencing, as recited in claim 1.

Appl. No. 10/621,414

The Advisory Action notes that an obviousness rejection based on a combination of references cannot be traversed by attacking the references individually. The Applicants therefore provide the following further comments regarding the claim feature of displaying a graphical display representing the sequencing of the plurality of power supplies. Combining the teachings of the three cited references as proposed in the Final Office Action, a skilled person might arguably be able to incorporate a simulation and analysis facility based on Siemens into a management and control system as proposed in Goodrich and Bjorklund. Although such a combined system might have both a simulation and analysis facility and some ability to control power system components, the combined system would still lack the claim feature of displaying a graphical display representing sequencing of power supplies, where such sequencing relates to startup or shutdown of the plurality of power supplies during operation of the power system. This feature is absent from Goodrich as acknowledged in the Final Office Action, and is also absent from Siemens and Bjorklund as discussed in detail above. The feature is therefore necessarily also absent from any combination of the cited references. Since the feature is absent from all of the cited references, those references cannot possibly in combination disclose the feature.

The final clause of claim 1 as amended recites producing configuration information for the control apparatus consistent with the displayed topology and sequencing of the plurality of power supplies. According to the amended claim, the control apparatus controls the plurality of power supplies in accordance with the produced configuration information. Therefore, the claim explicitly recites that the power supplies are controlled in accordance with configuration information that is consistent with the displayed topology and sequencing. No such feature has been disclosed in any of the cited references, and thus would also be absent from a combination of the references.

The absence of this feature from Goodrich is explicitly acknowledged on page 3 of the Final Office Action.

Siemens also does not disclose this claim feature. There is no disclosure or suggestion in Siemens of any such configuration information.

Appl. No. 10/621,414

In the "Response to Arguments" section of the Final Office Action it is contended that "a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art ... If the prior art structure is capable of performing the intended use, then it meets the claim.". It is respectfully submitted that this overlooks the facts that the claims are directed to a method and recite steps of the method. For the prior art to meet the claim, the steps of the method must be obvious from the prior art. In this case, they are not.

However, the Applicants note the comment that "In the above new rejection, the examiner has made clear in the interpretation that while the Siemens reference does teach the ability to turn machines on an [sic] off it does not specifically recite a process of user input specifying information determining the sequencing of the startup or shutdown of the power supplies and modifies the reference with Bjorklund to teach the missing information.".

As noted above, Siemens also does not teach any graphical display of sequencing information, or producing configuration information consistent with such sequencing, as recited in claim 1. Even if the system disclosed by Siemens can provide for turning on and off devices - and this is not conceded because Siemens only describes a simulator, not a control system - there is no disclosure or suggestion in Siemens of any sequencing for startup or shutdown of the power supplies or of producing configuration information consistent therewith. The "Activity Sequence Control" referred to in Siemens' short circuit analysis relates to something entirely different, and does not relate to sequencing power supplies for startup or shutdown as recited in claim 1.

Regarding Bjorklund, although control information for the process 1 is disclosed, there is no disclosure or suggestion of producing configuration information for control apparatus consistent with the displayed topology or sequencing of power supplies, since there is no disclosure or suggestion of any sequencing at all.

In light of the foregoing comments, it is believed to be clear that the cited references do not individually disclose the "producing" feature as defined in claim 1. Considering this feature in the context of the combined teachings of the cited references, it is apparent that the Examiner is interpreting configuration information in an overly broad sense. In the Advisory Action, the



Appl. No. 10/621,414

Examiner states that producing configuration information is interpreted as similar in structure where Siemens teaches providing configuration information for the dispatcher's work flow on page 2. It is clear from page 2 of Siemens that the dispatcher's power flow is used by operators to "simulate the effects of" various actions. Those skilled in the art would readily appreciate that simulation is used to avoid making actual changes in a system. Although the Applicants acknowledge that Bjorklund discloses a control system and that the cited combination of teachings might arguably thus include some sort of control facility, it would not be obvious to a skilled person to use information generated during simulation to actually control components of a power system.

Any person of skill in the art would appreciate that simulation of the effects of the various conditions noted on page 2 of Siemens would be intended to avoid implementing such conditions in an actual power system. Thus, information presented to an operator in a dispatcher's power flow would not be used by a skilled person to control power system components. Although a skilled person might arguably attempt to incorporate a simulation and analysis facility based on Siemens with the management systems disclosed in Goodrich and Bjorklund, a simulation facility would not typically provide configuration information that is used to actually control power system components to such a management system.

Actual control of power supplies consistent with sequencing therefore would not be obvious from the combination of Goodrich, Siemens, and Bjorklund. Control of power system components on the basis of simulation results, which the Examiner seems to regard as some form of sequencing, would be contrary to common knowledge and practice in the art. It is further noted by Applicants that the combined teachings of the references do not contemplate sequencing as claimed, and accordingly there is no sequencing with which configuration information could be consistent, as recited in claim 1. Thus, the combined teachings of Goodrich, Siemens, and Bjorklund would also not render the feature recited in the final clause of claim 1 obvious.

It is respectfully submitted that independent claim 1 patentably distinguishes over the cited combination of references for at least these reasons.

Appl. No. 10/621,414

Similar remarks apply to each of the independent claims 18 and 19, which as noted above have been amended in the same manner as claim 1. The methods as recited in these claims differ from the combined disclosures of Goodrich, Siemens, and Bjorklund as discussed above. For substantially the same reasons as claim 1, each of claims 18 and 19 also patentably distinguishes over the cited combination of references.

The dependent claims 2-17 and 20-25 are also patentable over the combination of applied references for the same reasons in view of their dependencies, as well as their own recitals of further features that are not disclosed or suggested by the combined teaching of Goodrich, Siemens, and Bjorklund.

In particular, for example, each of dependent claims 5 to 11 and 22 to 24 recites particular features of representing the sequencing of power supplies, which would not be obvious from the combined teachings of Goodrich, Siemens, and Bjorklund. In this respect the Final Office Action refers to Figs. 22-29 of Goodrich. However, as clearly described in Goodrich at column 14, lines 20-44, these illustrate the hierarchy of the power systems equipment, and they do not represent any sequencing of startup or shutdown as recited in these claims. Siemens and Bjorklund fail to cure this defect in the disclosure of Goodrich.

The Final Office Action further refers to Siemens as showing "arrows representing the sequencing (See page 7) e.g. - 376mv to pacific". The symbols used in this figure of Siemens appear not to be explained therein. They appear to relate to power flows, but in any event they do not represent any sequencing as recited in the claims of this application.

With respect to the comments in the Final Office Action referring to claim 14, it is observed that "sequencing for the flow of current through the circuit", whatever this refers to in the combination of Goodrich and Siemens, is not sequencing of startup or shutdown of the plurality of power supplies as recited in the present claims. There is nothing in the applied references that discloses, suggests, or makes obvious the sequencing of startup or shutdown as recited in the claims of this application.

Reconsideration and withdrawal of the claim rejections under 35 U.S.C. 103(a) are thus respectfully requested.

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MAY 28 2008

Appl. No. 10/621,414

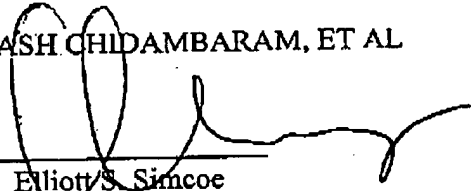
The Applicants respectfully requests reconsideration of this application, and consequent issue of a timely Notice of Allowance.

In the event that there are any remaining issues to be resolved prior to allowance of the application, the Examiner is invited to contact the undersigned by telephone, so as to most expediently resolve such issues.

Respectfully submitted,

AVINASH CHIDAMBARAM, ET AL

By

  
Elliott S. Simcoe  
Reg. No. 50,010  
Tel.: (613) 232-2486

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DMW/ESS/wfs